

REMARKS

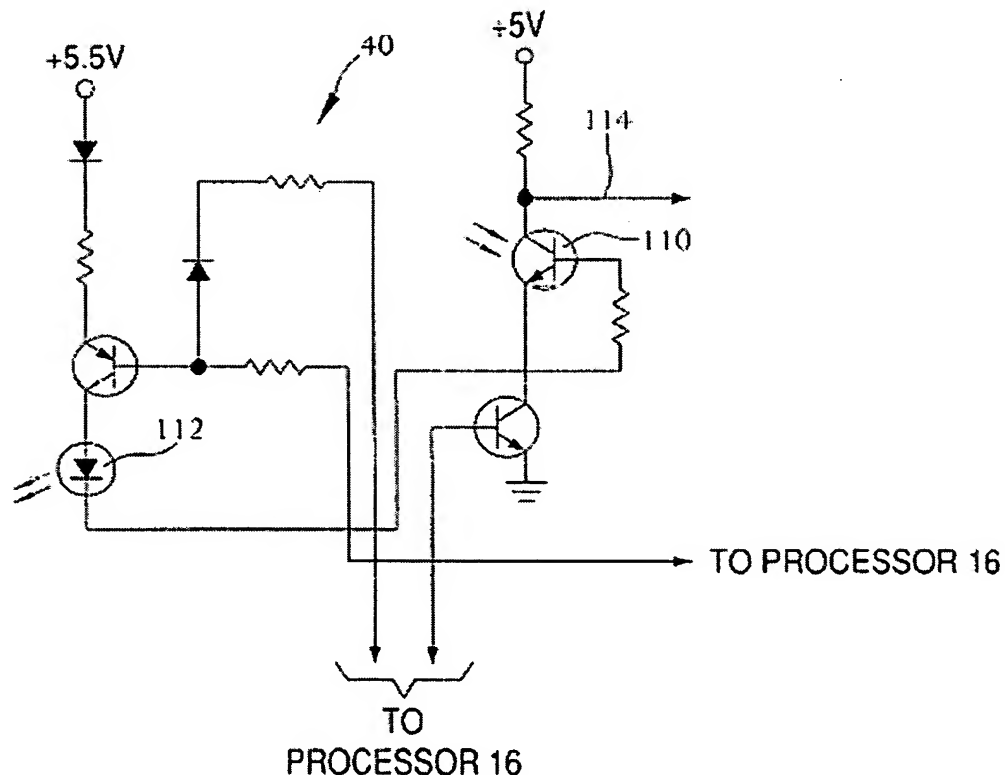
Entry of this response and reconsideration and allowance of the above-identified patent application are respectfully requested. Claims 1-20 were rejected in the office action. Claims 21-31 previously have been withdrawn. Claim 16 has been amended. No claims have been canceled or added. Therefore, following entry of the present response, claims 1-20 will be pending in the present application.

Claim 16 was objected to under 37 CFR 1.75(c) for depending from claim 9, instead of claim 8. Applicant has amended claim 16 to properly depend from claim 8. Applicant appreciates Examiner's suggested amendment.

Claims 1-10 and 13-20 stand rejected under 35 U.S.C. § 102 (b) as being anticipated by applicant disclosed prior art, Figures 1 and 2 of U.S. Patent No. 6,504,357 to Hemminger *et al.* ("Hemminger"), or in the alternative under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 5,555,508 to Munday *et al.* ("Munday"). In particular, the office action suggests, *inter alia*, that disclosed prior art, Munday and Hemminger teach an "optical diode [201] *in series* with the power supply." (*Office Action dated September 19, 2005* at p. 3) (emphasis added). With all due respect to the contentions in the office action, applicant respectfully disagrees.

As recited in independent claim 1, the optical diode is in series with the power supply. However, applicant disclosed prior art, Hemminger and Munday disclose an optical diode in *parallel* with the power supply. This is evident throughout Hemminger and Munday, and in particular in Figures 5 of both Hemminger and Munday.

For example, as shown below in Figure 5 of Hemminger, the output of the power supply is defined by the terminals indicated with “+5.5V” and “+5V” and the ground terminal. Following basic circuit analysis, the “LED 112” current is in parallel electrically with the current through transistor 110, both being drawn from the output of the power supply. Specifically, the branch of the circuit that includes LED 112 is in parallel electrically with the power supply (defined by +5.5V and +5V and ground) and the additional resistor and transistor (110) circuit directly below the +5V voltage source. This parallel arrangement is contrary to the claimed series arrangement.



As detailed throughout the entire present application, the series arrangement of the optical diode with respect to the power supply helps to reduce power consumption in the meter. This is because “[i]n an electronic meter, the power required to operate the optical diode often is equal to or even more than the power required by the other electronic circuits combined.” (*Specification* – paragraph 6). In fact, because prior art meters place an “optical

diode 201 . . . in parallel with the output of power supply 204 . . . the signals provided by optical diode 201 are proportional to the power consumed by the meter.” (*Specification* – paragraph 26). In one example, the optical diode may use as much as 10 milliamps (mA) of current from the power supply.

However, as claimed in the present embodiments, when “an optical diode 301 is connected in series with a power supply 307 . . . the DC current provided by power supply 301 may be provided to the remainder of metering circuits 306 via optical diode 301 with little or no additional consumption of current by optical diode 301. This is due to the fact that power supply 307 is burdened to provide additional voltage to accommodate the voltage drop across series-connected optical diode 301, rather than having to provide additional DC current required [by] a parallel-connected optical diode current at full DC voltage.” (*Specification* – paragraph 27).

Accordingly, applicant respectfully requests withdrawal of the rejection of claims 1-10 and 13-20 under 35 U.S.C. § 102 (b) over the applicant disclosed prior art and Figures 1 and 2 of Hemminger *et al.* (“Hemminger”), and in the alternative under 35 U.S.C. § 103(a) Munday.

Also, claims 11 and 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over applicant disclosed prior art and Hemminger as applied to claim 1 above, and further in view of U.S. Patent No. 4,274,082 to Litz *et al.* (“Litz”). For the same reasons as discussed above with respect to the rejection of claims 1-10 and 13-20 under 35 U.S.C. § 102 (b) over Hemminger, applicant respectfully requests the withdrawal of the rejection of claims 11 and 12 under 35 U.S.C. § 103(a) over applicant disclosed prior art and Hemminger in further view of Litz.

Finally, the office action suggested that the title of the invention is not “descriptive.” Applicant has elected not to amend the title at this time, but reserves the right to do so at a later date, depending upon the prosecution of the present patent application.

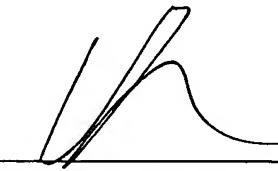
DOCKET NO.: ELSE-0826/E20030010
Application No.: 10/803,212
Office Action Dated: September 19, 2005

PATENT

CONCLUSION

In view of the foregoing, applicant respectfully submits that the claims are allowable and that the present application is in condition for allowance. Reconsideration of the application and an early Notice of Allowance are respectfully requested. In the event that the Examiner cannot allow the present application for any reason, the Examiner is encouraged to contact the undersigned attorney, Vincent J. Roccia at (215) 564-8946, to discuss resolution of any remaining issues.

Date: October 17, 2005



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